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AGREEMENT

CONCERNING THE ADOPTION OF UNIFORM TECHNICAL PRESCRIPTIONS FOR WHEELED VEHICLES, EQUIPMENT AND PARTS WHICH CAN BE FITTED AND/OR BE USED ON WHEELED VEHICLES AND THE CONDITIONS FOR RECIPROCAL RECOGNITION OF APPROVALS GRANTED ON THE BASIS OF THESE PRESCRIPTIONS */

(Revision 2, including the amendments entered into force on 16 October 1995)

Addendum 17: Regulation No. 18

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UNIFORM PROVISIONS CONCERNING THE APPROVAL OF MOTOR VEHICLES WITH REGARD TO THEIR PROTECTION AGAINST UNAUTHORIZED USE

UNITED NATIONS

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*/ Former title of the Agreement:

Agreement Concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, done at Geneva on 20 March 1958.

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Regulation No. 18

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF MOTOR VEHICLES WITH REGARD TO THEIR PROTECTION AGAINST UNAUTHORIZED USE

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1. SCOPE

This Regulation applies to:

1.1. PART I: Vehicles of category M_1 and N_1 1/ with regard to their protection against unauthorized use 2/.

1.2. PART II: Motor vehicles having at least three wheels with the exception of those of category M_1 and N_1 1/, with regard to their protection against unauthorized use.

PART I - APPROVAL OF A VEHICLE OF CATEGORY M_1 AND N_1 WITH REGARD TO ITS DEVICES TO PREVENT UNAUTHORIZED USE

2. DEFINITIONS

For the purpose of Part I of this Regulation,

2.1. "Vehicle type" means a category of motor vehicles which do not differ in such essential respects as:

2.1.1. The manufacturer's type designation,

2.1.2. The arrangement and design of the vehicle component or components on which the device to prevent unauthorized use acts,

2.1.3. The type of device to prevent unauthorized use;

2.2. "Device to prevent unauthorized use" means a system designed to prevent unauthorized normal activation of the engine or other source of main engine power of the vehicle in combination with at least one system which:

- locks the steering,
- locks the transmission, or
- locks the gearshift control.

2.3. "Steering" means the steering control, the steering column and its accessory cladding, the steering shaft, the steering gearbox and all other components which directly affect the effectiveness of the device to prevent unauthorized use;

2.4. "Combination" means one of the specifically developed and constructed variations of a locking system which, when properly activated, permits operation of the locking system;

1/ As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3), annex 7 (document TRANS/WP.29/78/Rev.1).

2/ At the request of the applicant for approval, vehicles of other categories may be approved to this Part I.

2.5. "Key" means any device designed and constructed to provide a method of operating a locking system which is designed and constructed to be operated only by that device.

2.6. "Rolling code" means an electronic code consisting of several elements the combination of which changes at random after each operation of the transmitting unit.

3. APPLICATION FOR APPROVAL

3.1. The application for approval of a vehicle type with regard to its devices to prevent unauthorized use shall be submitted by the vehicle manufacturer or by his duly accredited representative.

3.2. It shall be accompanied by the under-mentioned documents in triplicate and by the following particulars:

3.2.1. A detailed description of the vehicle type and of the vehicle parts related to the devices to prevent unauthorized use installed.

3.2.2. A list of components necessary to identify devices to prevent unauthorized use which can be installed on the vehicle.

3.3. A vehicle representative of the type to be approved shall be submitted to the technical service.

3.4. A vehicle not comprising all the components proper to the type may be accepted provided that it can be shown by the applicant to the satisfaction of the competent authority that the absence of the components omitted has no effect on the results of the verifications, so far as the requirements of this Regulation are concerned.

4. APPROVAL

4.1. If the vehicle submitted for approval pursuant to this Regulation meets the requirements of paragraphs 5, 6, and 7 below, approval of that vehicle type shall be granted.

4.2. An approval number shall be assigned to each type approved. Its first two digits (at present 02, corresponding to the 02 series of amendments which entered into force on 3 September 1997) shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The same Contracting Party may not assign the same number to another vehicle type.

4.3. Notice of approval or of extension or of refusal of approval of a vehicle type pursuant to this Regulation shall be communicated to the Contracting Parties to the Agreement applying this Regulation by means of a form conforming to the model in annex 1 to this Regulation.

4.4. There shall be affixed, conspicuously and in a readily accessible place specified on the approval form, to every vehicle conforming to a vehicle type approved under this Regulation, an international approval mark consisting of:

4.4.1. A circle surrounding the letter "E" followed by the distinguishing number of the country which has granted approval 3/;

4.4.2. The number of this Regulation, followed by the letter "R", a dash and the approval number to the right of the circle prescribed in paragraph 4.4.1.

4.5. If the vehicle conforms to a vehicle type approved under one or more other Regulations annexed to the Agreement, in the country which has granted approval under this Regulation, the symbol prescribed in paragraph 4.4.1. need not be repeated; in such a case the Regulation and approval numbers and the additional symbols of all the Regulations under which approval has been granted in the country which has granted approval under this Regulation shall be placed in vertical columns to the right of the symbol prescribed in paragraph 4.4.1.

4.6. The approval mark shall be clearly legible and indelible.

4.7. The approval mark shall be placed close to or on the vehicle data plate affixed by the manufacturer.

4.8. Annex 3 to this Regulation gives examples of arrangements of approval marks.

5. GENERAL SPECIFICATIONS

5.1. The device to prevent unauthorized use shall be so designed that it is necessary to put it out of action in order to enable:

5.1.1. The engine to be started by means of the normal control; and

5.1.2. The vehicle to be steered, driven or moved forward under its own power.

3/ 1 for Germany, 2 for France, 3 for Italy, 4 for the Netherlands, 5 for Sweden, 6 for Belgium, 7 for Hungary, 8 for the Czech Republic, 9 for Spain, 10 for Yugoslavia, 11 for the United Kingdom, 12 for Austria, 13 for Luxembourg, 14 for Switzerland, 15 (vacant), 16 for Norway, 17 for Finland, 18 for Denmark, 19 for Romania, 20 for Poland, 21 for Portugal, 22 for the Russian Federation, 23 for Greece, 24 (vacant), 25 for Croatia, 26 for Slovenia, 27 for Slovakia, 28 for Belarus, 29 for Estonia, 30-36 (vacant) and 37 for Turkey. Subsequent numbers shall be assigned to other countries in the chronological order in which they ratify or accede to the Agreement concerning the Recognition of Approval for Motor Vehicle Equipment and Parts, and the numbers thus assigned shall be communicated by the Secretary-General of the United Nations to the Contracting Parties to the Agreement.

5.2. The requirements of paragraph 5.1. shall be met by the application of a single key.

5.3. Except in the case provided for in paragraph 6.1.5., a system operated with a key inserted in a lock shall not permit removal of the key before the device referred to in paragraph 5.1. has come into action or has been set to act.

5.4. The device to prevent unauthorized use referred to in paragraph 5.1. above, and the vehicle components on which it operates, shall be so designed that it cannot rapidly and without attracting attention be opened, rendered ineffective or destroyed by, for example, the use of low-cost, easily concealed tools, equipment or fabrications readily available to the public at large.

5.5. The device to prevent unauthorized use shall be fitted to the vehicle as an item of original equipment (i.e. equipment installed by the vehicle manufacturer prior to first retail sale). It shall be fitted in such a way that even after removal of its housing it cannot, when in the blocked condition, be dismantled otherwise than with special tools. If it was possible to render the device to prevent unauthorized use ineffective by the removal of screws, those screws shall, unless they are of the non-removable type, be covered by parts of the blocked protective device.

5.6. Mechanical locking systems shall provide at least 1,000 different key combinations or a number equal to the total number of vehicles manufactured annually if less than 1,000. In vehicles of one type the frequency of occurrence of each combination shall be roughly one per 1,000.

5.7. Electrical/electronic locking systems, e.g. remote control, shall have at least 50,000 variants and shall incorporate a rolling code and/or have a minimum scan time of 24 hours per 5,000 variants.

5.8. The key and lock shall not be visibly coded.

5.9. The lock shall be so designed, constructed and fitted that turning of the lock cylinder, when in the locked position, with a torque of less than 2.45 Nm is not possible with any key other than the mating key, and

5.9.1. For lock cylinders with pin tumblers no more than two identical tumblers operating in the same direction shall be positioned adjacent to each other, and in a lock there shall not be more than 60 per cent identical tumblers,

5.9.2. For lock cylinders with disc tumblers no more than two identical tumblers operating in the same direction shall be positioned adjacent to each other, and in a lock there shall not be more than 50 per cent identical tumblers.

5.10. Devices to prevent unauthorized use shall be such as to exclude any risk of accidental operating failure while the engine is running, particularly in the case of blockage likely to compromise safety.

5.10.1. It shall not be possible to activate devices to prevent unauthorized use without first setting the engine controls to a stop condition and then performing an action which is not an uninterrupted continuation of stopping the engine.

5.10.2. In the case of devices to prevent unauthorized use, if the action of key withdrawal activates the device it shall either necessitate a minimum movement of 2 mm before activation of the device or incorporate an override facility to prevent accidental removal or partial withdrawal of the key.

5.11. Power assistance may be used only to activate the locking and/or unlocking action of the device to prevent unauthorized use. The device shall be kept in its operating position by any suitable means which does not need a power supply.

5.12. It shall not be possible to activate the motive power of the vehicle by normal means until the device to prevent unauthorized use has been deactivated.

5.13. Devices to prevent unauthorized use preventing release of the brakes of the vehicle shall not be permitted.

5.14. If the device to prevent unauthorized use is equipped with a driver warning feature it shall be activated when the operator opens the driver's side door, unless the device has been activated and the key removed by the operator.

6. PARTICULAR SPECIFICATIONS

In addition to the general specifications prescribed in paragraph 5, the device to prevent unauthorized use shall meet the particular conditions prescribed below:

6.1. <u>Devices to prevent unauthorized use acting on the steering</u>

6.1.1. A device to prevent unauthorized use acting on the steering shall render the steering inoperative. Before the engine can be started, the normal steering operation must be restored.

6.1.2. When the device to prevent unauthorized use is set to act, it shall not be possible to prevent the device from functioning.

6.1.3. The device to prevent unauthorized use must continue to meet the requirements of paragraphs 5.10., 6.1.1., 6.1.2. and 6.1.4. after it has undergone 2,500 locking cycles in each direction of the wear producing test specified in Part 1 of annex 4 to this Regulation.

6.1.4. The device to prevent unauthorized use shall, in its activated position, satisfy one of the following criteria:

6.1.4.1. It shall be strong enough to withstand, without damage to the steering mechanism likely to compromise safety, the application of a torque of 300 Nm about the axis of the steering spindle in both directions under static conditions.

6.1.4.2. It shall incorporate a mechanism designed to yield or slip, such that the system will withstand, either continuously or intermittently, the application of a torque of at least 100 Nm. The locking system must still withstand the application of this torque after the test specified in Part 2 of annex 4 to this Regulation.

6.1.4.3. It shall incorporate a mechanism designed to permit the steering wheel to rotate freely on the blocked steering spindle. The blocking mechanism shall be strong enough to withstand the application of a torque of 200 Nm about the axis of the steering spindle in both directions under static conditions.

6.1.5. If the device to prevent unauthorized use is such that the key can be removed in a position other than the position in which the steering is inoperative, it shall be so designed that the manoeuvre required to reach that position and remove the key cannot be effected inadvertently.

6.1.6. If a component fails such that the torque requirements specified in paragraphs 6.1.4.1., 6.1.4.2. and 6.1.4.3. cannot be easily applied, yet the steering system remains blocked, the system shall satisfy the requirements.

6.2. Devices to prevent unauthorized use acting on the transmission

6.2.1. A device to prevent unauthorized use acting on the transmission shall prevent the rotation of the vehicle's driving wheels.

6.2.2. When the device to prevent unauthorized use is set to act, it shall not be possible to prevent the device from functioning.

6.2.3. It shall not be possible for the transmission to be blocked inadvertently when the key is in the lock of the device to prevent unauthorized use, even if the device preventing starting of the engine has come into action or been set to act.

6.2.4. The device to prevent unauthorized use shall be so designed and constructed that it remains fully effective even after some degree of wear as a result of 2,500 locking cycles in each direction.

6.2.5. If the device to prevent unauthorized use is such that the key can be removed in a position other than the position in which the transmission is locked, it shall be so designed that the manoeuvre

required to reach that position and remove the key cannot be effected inadvertently.

6.2.6. The device to prevent unauthorized use shall be strong enough to withstand, without damage likely to compromise safety, the application in both directions and in static conditions of a torque 50 per cent greater than the maximum torque that can normally be applied to the transmission. In determining the level of this testing torque account shall be taken not of the maximum engine torque, but of the maximum torque that can be transmitted by the clutch or by the automatic transmission.

6.3. Devices to prevent unauthorized use acting on the gearshift control

6.3.1. A device to prevent unauthorized use acting on the gearshift control shall be capable of preventing any change of gear.

6.3.2. In the case of manual gearboxes it must be possible to lock the gearshift lever in reverse only; in addition locking in neutral shall be permitted.

6.3.3. In the case of automatic gearboxes provided with a "parking" position it must be possible to lock the mechanism in the parking position only; in addition locking in neutral and/or reverse shall be permitted.

6.3.4. In the case of automatic gearboxes not provided with a "parking" position it must be possible to lock the mechanism in the following positions only: neutral and/or reverse.

6.3.5. The device to prevent unauthorized use shall be so designed and constructed that it remains fully effective even after some degree of wear as a result of 2,500 locking cycles in each direction.

7. ELECTROMECHANICAL AND ELECTRONIC DEVICES TO PREVENT UNAUTHORIZED USE

Electromechanical and electronic devices to prevent unauthorized use, where fitted, shall comply with the requirements of paragraphs 5 and 6 above and paragraph 33 of Regulation No. 97, mutatis mutandis.

8. MODIFICATION OF THE VEHICLE TYPE AND EXTENSION OF APPROVAL

8.1. Every modification of the vehicle type shall be notified to the administrative department which approved the vehicle type. The department may then either:

8.1.1. Consider that the modifications made are unlikely to have an appreciable adverse effect and that in any case the devices to prevent unauthorized use still comply with the requirements, or

8.1.2. Require a further report from the technical service.

8.2. Confirmation or refusal of approval, specifying the alteration, shall be communicated by the procedure specified in paragraph 4.3. above to the Contracting Parties to the Agreement applying this Regulation.

8.3. The competent authority issuing the extension of approval shall assign a serial number to each communication form drawn up for such an extension.

9. CONFORMITY OF PRODUCTION PROCEDURES

The conformity of production procedures shall comply with those set out in the Agreement, Appendix 2 (E/ECE/324-E/ECE/TRANS/505/Rev.2), with the following requirements:

9.1. Vehicles approved under this Regulation with regard to their protection against unauthorized use shall be so manufactured as to conform to the type approved by meeting the requirements set forth in paragraphs 5, 6 and 7 above.

10. PENALTIES FOR NON-CONFORMITY OF PRODUCTION

10.1. The approval granted in respect of a vehicle type pursuant to this Regulation may be withdrawn if the requirements laid down in paragraph 9 above are not complied with.

10.2. If a Contracting Party to the Agreement applying this Regulation withdraws an approval it has previously granted, it shall forthwith so notify the other Contracting Parties applying this Regulation, by means of a form conforming to the model in annex 1 to this Regulation.

11. PRODUCTION DEFINITELY DISCONTINUED

If the holder of the approval completely ceases to manufacture a vehicle type approved in accordance with this Regulation, he shall so inform the authority which granted the approval. Upon receiving the relevant communication, that authority shall inform thereof the other Contracting Parties to the Agreement applying this Regulation by means of a form conforming to the model in annex 1 to this Regulation.

12. NAMES AND ADDRESSES OF TECHNICAL SERVICES RESPONSIBLE FOR CONDUCTING APPROVAL TESTS, AND OF ADMINISTRATIVE DEPARTMENTS

The Contracting Parties to the Agreement applying this Regulation shall communicate to the United Nations secretariat the names and addresses of the technical services responsible for conducting approval tests and of the administrative departments which grant approval and to which forms certifying approval or extension or

refusal or withdrawal of approval, issued in other countries are to be sent.

13. TRANSITIONAL PROVISIONS

13.1. As from the official date of entry into force of the 02 series of amendments, no Contracting Party applying this Regulation shall refuse to grant approvals to this Regulation as amended by the 02 series of amendments.

13.2. As from the official date of entry into force of the 02 series of amendments, Contracting Parties applying this Regulation shall grant approvals only if the vehicle type to be approved complies with the requirements of this Regulation as amended by the 02 series of amendments.

13.3. As from 1 October 1998, existing approvals to this Regulation shall cease to be valid, except in the case of vehicle types which comply with the requirements of this Regulation as amended by the 02 series of amendments.

PART II - APPROVAL OF A MOTOR VEHICLE HAVING AT LEAST THREE WHEELS WITH THE EXCEPTION OF THOSE OF CATEGORY M_1 AND N_1 WITH REGARD TO ITS DEVICES TO PREVENT UNAUTHORIZED USE

14. DEFINITIONS

For the purpose of Part II of this Regulation,

14.1. "Approval of a vehicle" means the approval of a vehicle type with regard to its protection against unauthorized use;

14.2. "Vehicle type" means a category of motor vehicles of categories M_2, M_3, N_2 and N_3 which do not differ in such essential respects as:

14.2.1. the manufacturer's indications of the vehicle type;

14.2.2. the arrangement and design of the vehicle component or components on which the protective device acts;

14.2.3. the type of protective device;

14.3. "Protective device" means a system designed to prevent unauthorized normal activation of the engine or other source of main engine power of the vehicle in combination with at least one system which:

- locks the steering;
- locks the transmission; or
- locks the gearshift control.

14.4. "Steering" means the steering control, the steering column and its accessory cladding, the steering shaft, the steering gearbox and all other components which directly affect the effectiveness of the protective device;

14.5. "Combination" means one of the specifically planned and constructed variations of a locking system which, when properly activated, permits operation of the locking system;

14.6. "Key" means any device designed and constructed to provide a method of operating a locking system which is designed and constructed to be operated only by that device.

15. APPLICATION FOR APPROVAL

15.1. The application for approval of a vehicle type with regard to a protective device to prevent its unauthorized use shall be submitted by the manufacturer or by his duly accredited representative.

15.2. It shall be accompanied by the undermentioned documents in triplicate and by the following particulars:

15.2.1. a detailed description of the vehicle type with regard to the arrangement and design of the control or of the unit on which the protective device acts;

15.2.2. drawings, on an appropriate scale and in sufficient detail, of the protective device and of its mountings on the vehicle;

15.2.3. a technical description of the device.

15.3. There shall be submitted to the technical service responsible for conducting the approval tests:

15.3.1. a vehicle, representative of the vehicle type to be approved, if requested by the technical service; and also

15.3.2. at the request of the technical service, such components of the vehicle as the service deems essential for the checks prescribed in paragraphs 17 and 18 of this Regulation.

16. APPROVAL

16.1. If the vehicle type submitted for approval pursuant to the Regulation meets the requirements of paragraphs 17 and 18 below, approval of that vehicle type shall be granted.

16.2. An approval number shall be assigned to each type approved. The first two digits (at present 02, corresponding to the 02 series of amendments which entered into force on 3 September 1997) shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of

issue of the approval. The same Contracting Party may not assign the same number either to the same vehicle type equipped with another type of protective device or whose protection device is mounted differently, or to another vehicle type.

16.3. Notice of approval or of refusal of approval of a vehicle type pursuant to this Regulation shall be communicated to the Contracting Parties to the Agreement which apply this Regulation by means of a form conforming to the model in annex 2 to this Regulation and of drawings of the protective device and its mounting supplied by the applicant for approval, in a format not exceeding A4 (210 x 297 mm) or folded to that format and on an appropriate scale.

16.4. There shall be affixed, conspicuously and in a readily accessible place specified on the approval form, to every vehicle conforming to a vehicle type approved under this Regulation, an international approval mark consisting of:

16.4.1. a circle surrounding the letter "E" followed by the distinguishing number of the country which has granted approval 4/;

16.4.2. the number of this Regulation, followed by the letter "R", a dash and the approval number to the right of the circle described in paragraph 16.4.1.

16.5. If the vehicle conforms to a vehicle type approved under one or more other Regulations annexed to the Agreement in the country which has granted approval under this Regulation, the symbol prescribed in paragraph 16.4.1. need not be repeated; in such case the Regulation and approval numbers and the additional symbols of all the Regulations under which approval has been granted in the country which has granted approval under this Regulation shall be placed in vertical columns to the right of the symbol prescribed in paragraph 16.4.1.

16.6. The approval mark shall be clearly legible and indelible.

4/ 1 for Germany, 2 for France, 3 for Italy, 4 for the Netherlands, 5 for Sweden, 6 for Belgium, 7 for Hungary, 8 for the Czech Republic, 9 for Spain, 10 for Yugoslavia, 11 for the United Kingdom, 12 for Austria, 13 for Luxembourg, 14 for Switzerland, 15 (vacant), 16 for Norway, 17 for Finland, 18 for Denmark, 19 for Romania, 20 for Poland, 21 for Portugal, 22 for the Russian Federation, 23 for Greece, 24 (vacant), 25 for Croatia, 26 for Slovenia, 27 for Slovakia, 28 for Belarus, 29 for Estonia, 30-36 (vacant) and 37 for Turkey. Subsequent numbers shall be assigned to other countries in the chronological order in which they ratify or accede to the Agreement concerning the Recognition of Approval for Motor Vehicle Equipment and Parts, and the numbers thus assigned shall be communicated by the Secretary-General of the United Nations to the Contracting Parties to the Agreement.

16.7. The approval mark shall be placed close to or on the vehicle data plate affixed by the manufacturer.

16.8. Annex 3 to this Regulation gives examples of arrangements of the approval mark.

17. GENERAL SPECIFICATIONS

17.1. The protective device shall be so designed that it is necessary to put it out of action in order to enable:

17.1.1. the engine to be started by means of the normal control; and

17.1.2. the vehicle to be steered, driven or moved forward under its own power.

17.2. The requirements of paragraph 17.1. shall be met by the single application of one key.

17.3. Except in the case provided for in paragraph 18.1.5. a system operated with a key inserted in a lock shall not permit removal of the key before the protective device referred to in paragraph 17.1. has come into action or has been set to act.

17.4. The protective device referred to in paragraph 17.1. above, and the vehicle components on which it operates, shall be so designed, that it cannot rapidly and without attracting attention, be opened, rendered effective, or destroyed by, for example, the use of low-cost, easily-concealed tools, equipment or fabrications readily available to the public at large.

17.5. The protective device shall be mounted on the vehicle as an item of original equipment (i.e. equipment installed by the vehicle manufacturer prior to first retail sale). It shall be fitted in such a way that even after removal of its housing it cannot, when in the blocked condition, be dismantled otherwise than with special tools. If it would be possible to render the protective device ineffective by the removal of screws, the screws shall, unless they are non-removable screws, be covered by parts of the blocked protective device.

17.6. The key locking system shall provide at least 1,000 different key combinations or a number equal to the total number of vehicles manufactured annually if less than 1,000. In vehicles of one type the frequency of occurrence of each combination shall be roughly one per 1,000.

17.7. The key and lock shall not be visibly coded.

17.8. The lock shall be so designed, constructed and fitted that turning of the lock cylinder, when in the locked position, with a torque of less than 0.245 mdaN is not possible with anything other than the mating key, and

17.8.1. for lock cylinders with pin tumblers no more than two identical tumblers operating in the same direction shall be positioned adjacent to each other, and in a lock there shall not be more than 60 per cent identical tumblers,

17.8.2. for lock cylinders with disc tumblers no more than two identical tumblers operating in the same direction shall be positioned adjacent to each other, and in a lock there shall not be more than 50 per cent identical tumblers.

17.9. Protective devices shall be such as to exclude any risk, while the vehicle is in motion, of accidental blockage likely to compromise safety in particular.

17.9.1. It shall not be possible to activate protective devices acting on the steering, transmission or gear shift control without first setting the engine controls to a stop condition and then performing an action which is not uninterrupted continuation of stopping the engine.

17.9.2. In the case of devices acting on the steering, transmission or gear shift control, if the action of key withdrawal activates the device, it shall either necessitate a minimum movement of 2 mm before activation of the device or incorporate an override facility to prevent accidental removal or partial withdrawal of the key.

17.10. Power assistance may be used only to activate the locking and/or unlocking action of the protective device. The device shall be kept in its operating position by mechanical means only.

17.11. It shall not be possible to activate the motive power of the vehicle by normal means until the protective device has been deactivated.

17.12. Protective devices preventing release of the brakes of the vehicle shall not be permitted.

17.13. If the protective system is equipped with a driver warning feature it shall be activated, unless the protective device has been activated and any key removed by the operator, when the operator opens the driver's side door.

18. PARTICULAR SPECIFICATIONS

In addition to the general specifications prescribed in paragraph 17, the protective device shall comply with the particular conditions prescribed below:

18.1. <u>Protective devices acting on the steering</u>

18.1.1. A protective device acting on the steering shall block the steering.

18.1.2. When the protective device is set to act, it shall not be possible to prevent the device from functioning.

18.1.3. The protective device must continue to meet paragraphs 17.9., 18.1.1., 18.1.2. and 18.1.4., after it has undergone 2,500 locking cycles in each direction of the wear producing test specified in annex 6.

18.1.4. The protective device shall, in its activated position, be strong enough to withstand, without damage to the steering mechanism likely to compromise safety, the application of a torque of 20 mdaN about the axis of the steering shaft in both directions under static conditions.

18.1.5. If the protective device is such that the key can be removed in a position other than the position in which the steering is locked, it shall be so designed that the manoeuvre required to reach that position and remove the key cannot be effected inadvertently.

18.2. Protective devices acting on the transmission

18.2.1. A protective device acting on the transmission shall prevent the rotation of the vehicles driving wheels.

18.2.2. When the protective device is set to act, it shall not be possible to prevent the device from functioning.

18.2.3. It shall not be possible for the transmission to be blocked inadvertently when the key is in the lock of the protective device, even if the device preventing starting of the engine has come into action or been set to act.

18.2.4. The protective device shall be so designed and constructed that it remains fully effective even after some degree of wear as a result of 2,500 locking cycles in each direction.

18.2.5. If the protective device is such that the key can be removed in a position other than the position in which the transmission is locked, it shall be so designed that the manoeuvre required to reach that position and remove the key cannot be effected inadvertently.

18.2.6. The protective device shall be strong enough to withstand, without damage likely to compromise safety, the application in both directions and in static conditions of a torque 50 per cent greater than the maximum torque that can normally be applied to the transmission. In determining the level of this testing torque account shall be taken, not of the maximum engine torque, but of the maximum torque that can be transmitted by the clutch or by the automatic transmission.

18.3. Protective devices acting on the gearshift control

18.3.1. A protective device acting on the gearshift control shall be capable of preventing any change of gear.

18.3.2. In the case of manual gearboxes it must be possible to look the gearshift lever in reverse only; in addition locking in neutral shall be permitted.

18.3.3. In the case of automatic gearboxes provided with a "parking" position it must be possible to lock the mechanism in the parking position only; in addition locking in neutral and/or reverse shall be permitted.

18.3.4. In the case of automatic gearboxes not provided with a "parking" position, it must be possible to lock the mechanism in the following positions only: neutral and/or reverse.

18.3.5. The protective device shall be so designed and constructed that it remains fully effective even after some degree of wear as a result of 2,500 locking cycles in each direction.

19. MODIFICATION OF THE VEHICLE TYPE AND EXTENSION OF APPROVAL

19.1. Every modification of the vehicle type shall be notified to the administrative department which approved the vehicle type. The department may then either:

19.1.1. Consider that the modifications made are unlikely to have an appreciable adverse effect and that in any case the protective devices still comply with the requirements, or

19.1.2. Require a further report from the technical service responsible for conducting the tests.

19.2. Confirmation or refusal of approval, specifying the alteration, shall be communicated by the procedure specified in paragraph 16.3. above to the Contracting Parties to the Agreement applying this Regulation.

19.3. The competent authority issuing the extension of approval shall assign a serial number to each communication form drawn up for such an extension.

20. CONFORMITY OF PRODUCTION PROCEDURES

The conformity of production procedures shall comply with those set out in the Agreement, Appendix 2 (E/ECE/324-E/ECE/TRANS/505/Rev.2), with the following requirements:

20.1. Vehicles approved under this Regulation with regard to their protection against unauthorized use shall be so manufactured as to conform to the type approved by meeting the requirements set forth in paragraphs 17 and 18 above.

21. PENALTIES FOR NON-CONFORMITY OF PRODUCTION

21.1. The approval granted in respect of a vehicle type pursuant to this Regulation may be withdrawn if the requirements laid down in paragraph 20 above are not complied with.

21.2. If a Contracting Party to the Agreement applying this Regulation withdraws an approval it has previously granted, it shall forthwith so notify the other Contracting Parties applying this Regulation, by means of a form conforming to the model in annex 2 to this Regulation.

22. PRODUCTION DEFINITELY DISCONTINUED

If the holder of the approval completely ceases to manufacture a vehicle type approved in accordance with this Regulation, he shall so inform the authority which granted the approval. Upon receiving the relevant communication, that authority shall inform thereof the other Contracting Parties to the Agreement applying this Regulation by means of a form conforming to the model in annex 2 to this Regulation.

23. DEVICES PROVIDED ADDITIONALLY

23.1. Approval under this Part II of the Regulation may be granted with respect to a protective device additionally equipped with an acoustic or visual warning device, or with respect to the optional fitting of supplementary devices to prevent the unauthorized use of the vehicle, provided that the supplementary devices require a separate means of activation; the Contracting Parties to the Agreement which apply this Regulation shall not be deemed to be precluded by the provisions of Article 3 of the Agreement to which the Regulation is annexed from prohibiting such additional devices on vehicles registered by them.

23.2. If the protective device is additionally equipped with an external acoustic and/or visual warning device, the signals emitted by the warning device shall be brief and shall end automatically after not more than 30 seconds; they shall recommence only if the device is actuated again. In addition,

23.2.1. if the signal is acoustic, it may be emitted by the audible warning device normally fitted to the vehicle;

23.2.2. if the signal is visual, it shall be produced solely by flashing of the vehicle's passing lights.

24. TRANSITIONAL PROVISIONS

No Contracting Party applying this Regulation shall refuse a type of vehicle of categories other than M_1 and N_1 approved to the 01 series of amendments to this Regulation.

25. NAMES AND ADDRESSES OF TECHNICAL SERVICES RESPONSIBLE FOR CONDUCTING APPROVAL TESTS, AND OF ADMINISTRATIVE DEPARTMENTS

The Contracting Parties to the Agreement applying this Regulation shall communicate to the United Nations secretariat the names and addresses of the technical services responsible for conducting approval tests and of the administrative departments which grant approval and to which forms certifying approval or extension or refusal or withdrawal of approval, issued in other countries are to be sent.

Annex 1

COMMUNICATION

(maximum format: A4 (210 x 297 mm))

issued by: Name of administration:
.....
.....
.....

concerning: 2/ APPROVAL GRANTED
APPROVAL EXTENDED
APPROVAL REFUSED
APPROVAL WITHDRAWN
PRODUCTION DEFINITELY DISCONTINUED

of a vehicle type with regard to its protection against unauthorized use pursuant to Part I of Regulation No. 18.

Approval No. .... Extension No. ....

1. Trade name or mark of the vehicle: . . . . . .

2. Vehicle type: . . . . . .

3. Manufacturer's name and address: . . . . . .

4. If applicable, name and address of manufacturer's representative:
. . . . . .

5. Brief description: . . . . . .

6. Vehicle submitted for approval on: . . . . . .

7. Technical service responsible for conducting approval tests: . . . . .
. . . . . .

8. Date of report issued by that service: . . . . . .

9. Number of report issued by that service: . . . . . .

10. Approval has been granted/extended/refused/withdrawn 2/:

11. Reason (s) for extension of approval: . . . . . .

12. Position of the approval mark on the vehicle: . . . . . .

13. Place: . . . . . .

14. Date: . . . . . .

15. Signature: . . . . . .

16. The following documents, bearing the approval number shown above, are attached to this communication:

Brief description of the device(s) against unauthorized use and the vehicle part(s) on which it (they) act(s);

List of files deposited with the Administrative Service which has granted type approval, and which can be obtained upon request.

1/ Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

2/ Strike out what does not apply.

Annex 2

COMMUNICATION

(maximum format: A4 (210 x 297 mm))

issued by: Name of administration:
.....
.....
.....

concerning: 2/ APPROVAL GRANTED
APPROVAL EXTENDED
APPROVAL REFUSED
APPROVAL WITHDRAWN
PRODUCTION DEFINITELY DISCONTINUED

of a type of vehicle with regard to its protection against unauthorized use pursuant to Part II of Regulation No. 18.

Approval No. .... Extension No. ....

1. Trade name or mark of the motor vehicle: . . . . . .

2. Vehicle type: . . . . . .

3. Manufacturer's name and address: . . . . . .

4. If applicable, name and address of manufacturer's representative: . . . . . .

5. Brief description of the protective device of its mounting, and of the vehicle component or function on which it acts (apart from starting of the engine), i.e. steering/gear-shift control/transmission 2/ . . . . . .

6. The vehicle is additionally equipped with an acoustic/visual 2/ warning device of the following type : . . . . . .

7. Vehicle submitted for approval on: . . . . . .

8. Technical service responsible for conducting approval tests: . . . . .

9. Date of report issued by that service: . . . . . .

10. Number of report issued by that service: . . . . . .

11. Approval has been granted/extended/refused/withdrawn 2/

12. Reason (s) for extension of approval: . . . . . .

13. Position of the approval mark on the vehicle: . . . . . .

14. Place: . . . . . .

15. Date: . . . . . .

16. Signature: . . . . . .

16. A list of files bearing the approval number shown above deposited with the Administrative Service which has granted type approval, and which can be obtained upon request is attached to this communication.

1/ Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

2/ Strike out what does not apply.

Annex 3

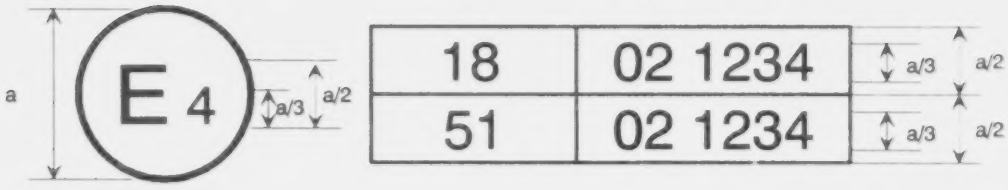
EXAMPLES OF ARRANGEMENTS OF APPROVAL MARKS

Model A

a = 8 mm min

The above approval mark affixed to a vehicle shows that the type concerned has been approved in the Netherlands (E 4), pursuant to Regulation No. 18 under approval No. 021234. The first two digits (02) of the approval number indicate that the approval was granted in accordance with the requirements of Regulation No. 18 including the 02 series of amendments.

Model B



a = 8 mm min

The above approval mark affixed to a vehicle shows that the type concerned has been approved in the Netherlands (E 4) pursuant to Regulations Nos. 18 and 51. 1/ The first two digits of the approval numbers indicate that, on the date on which these approvals were granted, both Regulations Nos. 18 and 51 included the 02 series of amendments.

1/ The second number is given merely as an example.

Annex 4 - Part 1

WEAR PRODUCING TEST PROCEDURE FOR DEVICES TO PREVENT UNAUTHORIZED USE ACTING ON THE STEERING

1. Test equipment

The test equipment shall consist of:

1.1. A fixture suitable for mounting the sample steering complete with the device to prevent unauthorized use attached, as defined in paragraph 2.2. of this Regulation,

1.2. A means for activating and deactivating the device to prevent unauthorized use which shall include the use of the key,

1.3. A means for rotating the steering shaft relative to the device to prevent unauthorized use.

2. Test method

2.1. A sample of the steering complete with the device to prevent unauthorized use is attached to the fixture referred to in paragraph 1.1. above.

2.2. One cycle of the test procedure shall consist of the following operations:

2.2.1. Start position. The device to prevent unauthorized use shall be deactivated and the steering shaft shall be rotated to a position which prevents engagement of the device to prevent unauthorized use, unless it is of the type which permits locking in any position of the steering.

2.2.2. Set to activate. The device to prevent unauthorized use shall be moved from the deactivated to the activated position, using the key.

2.2.3. 1/ Activated. The steering spindle shall be rotated such that the torque on it, at the instant of engagement of the device to prevent unauthorized use, shall be 40 Nm ± 2 Nm.

2.2.4. Deactivated. The device to prevent unauthorized use shall be deactivated by the normal means, the torque being reduced to zero to facilitate disengagement.

2.2.5. 1/ Return. The steering spindle shall be rotated to a position which prevents engagement of the device to prevent unauthorized use.

2.2.6. Opposite rotation. Repeat procedures described in paragraphs 2.2.2., 2.2.3., 2.2.4. and 2.2.5., but in the opposite direction of rotation of the steering spindle.

2.2.7. The time interval between two successive engagements of the device shall be at least 10 seconds.

2.3. The wear-producing cycle shall be repeated the number of times specified in paragraph 6.1.3. of this Regulation.

1/ If the device to prevent unauthorized use permits locking in any position of the steering, the procedures described in paragraphs 2.2.3. and 2.2.5 shall be omitted.

Annex 4 - Part 2

TEST PROCEDURE FOR DEVICES TO PREVENT UNAUTHORIZED USE ACTING ON THE STEERING USING A TORQUE LIMITING DEVICE

1. Test equipment

The test equipment shall consist of:

1.1. A fixture suitable for holding the relevant parts of a steering system or, if the test is carried out on a complete vehicle, a jacking system capable of lifting all the steered wheels clear of the ground, and

1.2. A device or devices capable of producing, and measuring, a torque applied to the steering control as prescribed in paragraph 2.3. The measurement precision must be less than or equal to 2 per cent.

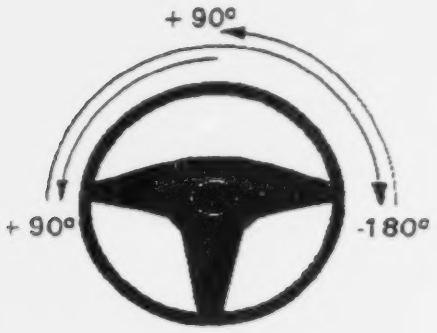
2. Test procedure description

2.1. If the test is carried out on a complete vehicle, the test shall be carried out with all the steered wheels of the vehicle held clear of the ground.

2.2. The steering lock shall be activated such that the steering is blocked.

2.3. A torque shall be applied to the steering control such that it rotates.

2.4. The test cycle includes a rotation of the steering control of 90° followed by a rotation in the opposite direction of 180°, and a new rotation of 90° in the original direction (see figure);
1 cycle = +90° / -180° / +90° with a tolerance of ± 10 per cent



2.5. A cycle duration is equal to 20 s ± 2 s.

2.2.6 Five test cycles shall be carried out.

2.7. During each of the test cycles the minimum recorded value of the torque shall be higher than that given in paragraph 6.1.4.2. of this Regulation.

Annex 5

ELECTRICALLY POWERED SYSTEM TEST

1. Carry out the following procedure with an appropriate closure in the closed locked position:

1.1. Disconnect the battery positive (+) lead for 4 min;

1.2. Reconnect the battery positive (+) lead;

1.3. Disconnect the battery negative (-) lead for 4 min;

1.4. Reconnect the battery negative (-) lead;

1.5. Reverse the normal polarity of the supply to the system for 4 min;

1.6. Increase the supply voltage to twice the normal system voltage for 4 min;

1.7. Expose the system to an electromagnetic field of 24 V/m over a frequency range of 20 MHz to 1,000 MHz.

NOTE: The system may be isolated so as to protect non-security systems not under test.

Annex 6

WEAR-PRODUCING TEST PROCEDURE FOR PROTECTIVE DEVICES ACTING ON THE STEERING

1. Test equipment

The test equipment shall consist of:

1.1. A fixture suitable for mounting the sample steering complete with the protective device attached, as defined in paragraph 14.3. of this Regulation;

1.2. A means for activating and deactivating the protective device which shall include the use of the key;

1.3. A means for rotating the steering shaft relative to the protective device.

2. Test method

2.1. A sample of the steering complete with the protective device is attached to the fixture referred to in paragraph 1.1. above.

2.2. One cycle of the test procedure shall consist of the following operations:

2.2.1. Start position. The protective device shall be deactivated and the steering shaft shall be rotated to a position which prevents engagement of the protective device, unless it is of the type which permits locking in any position of the steering.

2.2.2. Set to activate. The protective device shall be moved from the deactivated to the activated position, using the key.

2.2.3. 1/ Activated. The steering shaft shall be rotated such that the torque on it, at the instant of engagement of the protective device, shall be 5.85 Nm ± 0.25 Nm.

2.2.4. Deactivated. The protective device shall be deactivated by the normal means, the torque being reduced to zero to facilitate disengagement.

2.2.5. 1/ Return. The steering shaft shall be rotated to a position which prevents engagement of the protective device.

1/ If the protective device permits locking in any position of the steering, the procedures described in paragraphs 2.2.3. and 2.2.5 shall be omitted.

2.2.6. Opposite rotation. Repeat procedures described in paragraphs 2.2.2., 2.2.3., 2.2.4. and 2.2.5., but in the opposite direction of rotation of the steering shaft.

2.2.7. The time interval between two successive engagements of the device shall be at least 10 seconds.

2.3. The wear-producing cycle shall be repeated for the number of times specified in paragraph 18.1.3. of this Regulation.